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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,509	08/29/2001	Christopher B. Weare	MSFT-0586/167513.2	9603
7590	06/29/2005		EXAMINER	
Thomas E. Watson WOODCOCK WASHBURN KURTZ MACKIEWICZ & NORRIS LLP One Liberty Place - 46th Floor Philadelphia, PA 19103			FLANDERS, ANDREW C	
			ART UNIT	PAPER NUMBER
			2644	
			DATE MAILED: 06/29/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/942,509	WEARE ET AL.	
	Examiner	Art Unit	
	Andrew C. Flanders	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 May 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7,11-19,21-24 and 38-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7,11-19,21-24 and 38-54 is/are rejected.
- 7) Claim(s) 19,21,24,53 and 54 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 August 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1 and 38 objected to because of the following informalities: it is unclear what the data in the phrase "applying the data stored", which occurs three times through the claims. The data apparently refers to the data stored in the output matrix and will be understood that way for the purpose of this action, however further clarification is requested. Appropriate correction is required.

Claims 24 is objected to because of the following informalities: Claim 24 recites "the step of continuing peaks" which should apparently read "a step of continuing peaks".

Claims 19, 21, 53 and 54 objected to because of the following informalities: Claims 19, 21, 53 and 54 need to be rewritten to include the missing elements of the claims they incorporate. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14, 22 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14 and 48 recites the limitation "the... interpolation stage" in line 2 of the claims. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the melodic movement". There is insufficient antecedent basis for this limitation in the claim.

Claim 22 further recites the limitation "the melodic vector". There is insufficient antecedent basis for this limitation in the claim.

Claim 22 further recites the limitation "the melodic movement principal components". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

- Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21, 22 - 24 and 54 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 21, 22 - 24 and 54 are directed to a series of steps to be performed on a computer which do not contain any pre or post processing activity and do not produce any useful output; they only manipulate an abstract idea. For further reference please see MPEP Section 2106 regarding computer related inventions.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 2644

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4 and 1 respectively of U.S. Patent No. 6,910,035 in view of Goldberg U.S. Patent 6,606,624.

Here, Claims 4 and 1 of U.S. Patent 6,910,035 recites a method for automatically classifying consonance of audio data and a computer readable medium bearing computer executable instructions for, comprising:

applying audio data to a peak detection process;

detecting the location of at least one prominent peak represented by the audio data in a frequency spectrum and determining the energy of the at least one prominent peak;

storing the location of the at least one prominent peak and the energy of the at least one prominent peak into at least one output matrix as output matrix data;

applying the output matrix data stored in said at least one output matrix to critical band masking filtering;

applying the output matrix data stored in said at least one output matrix to a peak continuation process; and

applying the output matrix data stored in said at least one output matrix to an intervals calculation process where a frequency of ratios between peaks are stored into an output vector for the audio data being classified.

The method of claim 4 of 6,910,035 differs from that of claim 1 of the present application herein in that it fails to disclose further comprising transforming the melodic vector to extract the salient features of the data via principal component analysis.

Goldberg discloses:

transforming the melodic vector to extract the salient features of the data via principal component analysis (i.e. using a novel principal component analysis for efficient and effective information retrieval for content such as books; col. 2 lines 26 – 37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of claim 4 of U.S. Patent 6,9010,035 to transform the melodic vector to extract the salient features of the data via principal component analysis as taught by Goldberg. One would have been motivated to do so for efficient and effective information retrieval as shown in col. 2 lines 26 – 37 of Goldberg.

Claims 2 – 7 and 11 – 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5 - 10 and 13 - 20 of U.S. Patent No. 6,910,035. Although the conflicting claims are not identical, they

are not patentably distinct from each other because of the same reasons above regarding claim 1.

Claim 38 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,910,035. Although the conflicting claims are not identical, they are not patentably distinct from each other.

In claim 6 of patent 6,910,035, the frame by frame approach is said to include bin differencing. However, in claim 38 of the present application the frame by frame approach is said to be completed by frame differencing. The terms frame differencing and bin differencing are viewed as having equivalent definitions.

Claims 39 – 52 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7 - 20 of U.S. Patent No. 6,910,035. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the same reasons stated above regarding claim 38.

Claim 54 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 6,910,035. Although the conflicting claims are not identical, they are not patentably distinct from each other because although claim 6 does not disclose the method within a computer readable medium bearing computer executable instructions. However, Claim 1

discloses the same limitations of claim 4 of which claim 6 depends upon within computer readable medium bearing computer executable instructions. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the method of claim 6 within a computer readable medium as disclosed by claim 1. One would have been motivated to do so to implement the method on any standard PC.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/942,509
Art Unit: 2644

Page 8



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